VERSION AS CHANGED

IN THE CLAIMS

1. Electric machine with a slip ring (1, 11, 12, 52) and a brush holder (3, 12, 22, 51) characterized by a brush dust collecting device (41) which comprises a dust collecting head (6, 13, 21, 42) which is arranged in the immediate proximity of the slip ring (1, 11, 23, 52).

2. Electric machine according to claim 1, characterized in that the dust collecting head (6, 13, 21, 42) comprises an inlet opening (7, 17, 25, 53) which as seen in rotation direction of the slip ring (1, 11, 23, 52) is arranged immediately behind the brush holder (3, 12, 22, 51).

3. Electric machine according to claim 1, characterized in that the dust collecting head (6, 13) comprises means (16) which guide the brush dust to the inlet opening (7, 17).

4. Electric machine according to claim 1, characterized in that the dust collecting head (6, 13, 21) and the brush holder (3, 12, 22) form a compact component.

5. Electric machine according to claim 1, characterized in that the distance between the slip ring (23, 52) and the--as seen in rotation direction (27, 54) of the slip ring (23, 52)--front edge (28) of the dust collecting head (21, 42) is greater than the distance between the slip ring (23, 52) and the rear edge (29) of the dust collecting head (21, 42).

6. Electric machine according to claim 1, characterized in that the brush dust collecting device (31) comprises a collecting container (45) for brush dust (48) and that the dust collecting head (42) has an outlet opening which is connected through a pipe or tube system (43) with the collecting container (45).

7. Electric machine according to claim 6 characterized in that the brush dust collecting device (41) comprises a suction fan (44).

8. Electric machine according to claim 1, characterized in that the brush dust collecting device (41) comprises a filter (46) which is suited to retain brush dust (48) in the collecting container (45).

9. Electric machine according to claim 1, characterized in that the slip ring (1, 11) rotates in operation about a vertical axis of rotation.

10. Electric machine according to claim 2, characterized in that the dust collecting head comprises means which guide the brush dust to the inlet opening.

11. Electric machine according to claim 2, characterized in that the dust collecting head and the brush holder form a compact component.

12. Electric machine according to claim 3, characterized in that the dust collecting head and the brush holder form a compact component.

13. Electric machine according to claim 2, characterized in that the distance between the slip ring and the --as seen in rotation direction of the slip ring--front edge of the dust collecting head is greater than the distance between the skip ring and the rear edge of the dust collecting head.

14. Electric machine according to claim 3, characterized in that the distance between the slip ring and the --as seen in rotation direction of the slip ring--front edge of the dust collecting head is greater than the distance between the skip ring and the rear edge of the dust collecting head.

15. Electric machine according to claim 4, characterized in that the distance between the slip ring and the --as seen in rotation direction of the slip ring--front edge of the dust collecting head is greater than the distance between the skip ring and the rear edge of the dust collecting head.

16. Electric machine according to claim 2, characterized in that the brush dust collecting device comprises a collecting container for brush dust and that the dust collecting head has an outlet opening which is connected through a pipe or tube system with the collecting container.

17. Electric machine according to claim 3, characterized in that the brush dust collecting device comprises a collecting container for brush dust and that the dust collecting head has an outlet opening which is connected through a pipe or tube system with the collecting container.

18. Electric machine according to claim 4, characterized in that the brush dust collecting device comprises a collecting container for brush dust and that the dust collecting head has an outlet opening which is connected through a pipe or tube system with the collecting container.

19. Electric machine according to claim 5, characterized in that the brush dust collecting device comprises a collecting container for brush dust and that the dust collecting head has an outlet opening which is connected through a pipe or tube system with the collecting container.

20. Electric machine according to claim 7, characterized in that the brush dust collecting device comprises a suction fan.